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US PAT NO: 5,837,252 [IMAGE AVAILABLE] L1: 1 of 1 US-CL-CURRENT: 424/195.1 => \$424/195.1/ccls L2 2975 424/195.1/CCLS => \$ ndga L3 146 NDGA	2299 HSV 6622 HFRFFS 23211 VIRUS 1 - 227 VIRAL 2	=> d 1-6 1. 5.837.252, Nov. 17, 1998, Nontoxic extract of Larrea tridentata and method of making same; Robert A. Simout, et al., 424/195.1 [IMAGE AVAILABLE] 2. 5,663.209, Sep. 2, 1997, Compounds for the suppression of HIV Tat transactivation; Ru Chih C. Huang, et al., 514/731, 885, 934 [IMAGE AVAILABLE] 3. 5,541,232, Jul. 30, 1996, Treatment of multidrug resistant diseases; Stephen Howell, et al., 514/731, 727 [IMAGE AVAILABLE] 4. 5,276,660, Jan. 4, 1994, Methods of treating tumors with compositions of carecholic butanes; Edward S. Neiss, et al., 514/731 [IMAGE AVAILABLE]
(FILE 'USPAT ENTERED AT 16:13:53 ON 06 JUN 1999) E SINNOT, RAIN L1 1S E16 L2 2975 S 424/195.I/CCLS L3 146 S NOCA L1 7277 S 1187. OR 1HERPES OR VIRU'S OR VIRAL L5 499 S NORDHIN'DRO? L6 1559 S 508/579/626/630/631,633,700.716,700,717/CCLS L7 456 S 12 OR L5 L8 6 S (L7 OR L5 OR L5) P. E GNABRE, JIN	FILE FREQUINCY TERM	US PAT NO. 5,837,252 [IMAGE AVAIIABIE] LI: 1 of 1 DATE ISSUED: Nov. 17, 1998 TITLE: Nontoxic extract of Larrea tridentata and method of making same INVENTOR: "*Robert A. Simont**, Chandler, AZ W. Dennis Clark, Phoenix, AZ Kemeth Frank DeBoer, Belgrade, MT ASSIGNEE: Larreacop, Ltd., Chandler, AZ (U.S. corp.) APPL-NO: 087726,686 DATE FILED: Oct. 7, 1996 ART-UNIT: 161 PRIM-EXMR: Jean C. Witz ASST-EXMR: Susan Hanley LEGAL-REP: David K. Benson, Steven L. Nichols

compositions of catecholic butanes; Edward S. Neiss, et al., 514/731 [IMAGE AVAILABLE]

6. 4,880,637, Nov. 14, 1989, Compositions of catecholic butanes with zinc; Russell T. Jordan, 424/641; 514/731, 736, 859, 863 [INAGE AVAILABLE]

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Charles G. Smith, Rancho Santa Fe, CA "ESPARIE: Ct. rr.v. Plantacecalicals, Inc., Tarrytown, NY (U.S. corp.) APPL-NO. 08-264-740 DATE FILED: Jun. 23, 1994 ART-UNIT: 125 L8: 3 of 6 Treatment of multidrug resistant diseases US PAT NO: 5,541,232 [IMAGE AVAILABLE] DATE ISSUED: Jul. 30, 1996 INVENTOR: Stephen Howell, Del Mar, CA Atul Khandwala, Edgewater, NJ Om P. Sachdey, New City, NY PRIM-EXMR: Theodore J. Criares

US PAT NO: 5,541,232 [IMAGE AVAILABLE]

Weiser & Associates

LEGAL-REP:

L8: 3 of 6

ABSTRACT:

A method and composition for treating multidrug resistance in a mammal, in which the composition includes NDGA or an analog of NDGA in accordance with the following formula: ##\$TINH## wherein R, sub. 1 and R, sub. 2 are misting the proper along the proper apply or lower apyl. R, sub. 3, R, sub. 4, R, sub. 5, and R, sub. 6 are independently H or lower

R.sub.7, R.sub.8 and R.sub.9 are independently H, hydroxy, lower alkoxy or lower acyloxy; and R.sub.10 and R.sub.13 are independently H or lower R.sub.10, R.sub.11, R.sub.12 and R.sub.13 are independently H or lower

alkyl, in a pharmaceutically acceptable vehicle.

The method is particularly suitable for administering an antineoplastic agent, and the composition includes the combination of NDGA, or an analog with such an antineoplastic agent.

DETDESC:

DETD(83)

listed in said patents. Several of these catecholic butanes have been found to be particularly effective against human breast adenocarcinoma including **NDGA**. These butanes, in addition to **NDGA**, include the following: 4,1 **NDGA**, **NDGA** In . . . in the treatment of disorders of the skin, like psoniasis, acne, active keratosis, skin wounds warts, bacterial infections, fungal and **viral** infections, and solid mammalian tumors illustratively Tetrapropionate;

1.4-bis(3*methoxy-4*hydroxyphenyl butane, 1.4-bis(3*methoxy-4*-hydroxyphenyl)-2,3-dimethyl butane; 1.43*-4-dihydroxyphenyl)-4(2'.3',4*-tihydroxyphenyl)-4(2'.3',4*-tihydroxyphenyl)-4(2'.4',5*-tihydroxyphenyl)-butane; 1.43*-4-dihydroxyphenyl)-butane; 1.43*-4-dihydroxyphenyl)-butane; and 1.43*-4-dihydroxyphenyl)-butane; and 1.43*-4-dihydroxyphenyl)-butane.

US PAT NO: 5,276,060 [IMAGE AVAILABLE] L8: 4 of 6
DATE ISSUED: Jan 4, 1994
TITLE: Methods of treating tumors with compositions of catecholic

5. 5,008,294, Apr. 16, 1991, Methods of treating tumors with

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	vol. 719. Amer. Soc. Hematol. vol. 88(2) Nador et al., Primary Effusion Lymphoma: A Distinct Clinicopathologic Entity Associated With the Kaposi's Sarcoma—Associated Herpes Virus, 1996, pp. 645-656. The Philadelphia Inquier Creuson, Raposi's Sarcoma is tied to herpes, Jul. 31, 1996, p. A4. Alman, Aids Cancer Said to Have Viral Source: Breakthrough Seen in Kaposi's Sarcoma, Etb. 1, 1995, p. A4. Alman, Aids Cancer Said to Have Viral Source: Breakthrough Seen in Kaposi's Sarcoma, Etb. 1, 1995, p. A22 The New York Times. Critchified et al., Inhibition of HIV Activation in Latenty Infected Cells by Flavonoid Compounds in AIDS Research and Human Retroviruses, 1996, pp. 39-46 vol. 12(1). Amer. College Phys. vol. 12(1). Amer. College Phys. vol. 12(1). Israel et al., Effect of Treatment With Zileuton, a 5-Lipoxygenase Inhibitor, in Patients With Asthma, 196, pp. 932-936 JAMA vol. 275(12). Gordon, The Microbicical Potential of Various Creosotebush (Larea Tridentia) Extracts, 1987, pp. 83-83 vol. 21, J. Arizona–Nevada Acad. Soi. ART-UNIT: 161 PRIM-EXMR: Susan Hanley LEGAL-REP: David K. Benson, Steven L. Nichols ABSTRACT: A nontroxic, therapeutic agent having pharmacological activity comprising concernated extract of Larest ridentian plant material and assocrbic acid, an ascorbic acid sait, burylated hydroxyanisole, burylated hydroxyoluene, hydrogen sulfide, hypophosphorous acid, monothologycerol, potassium bisulfite, propyl
effective in treating benign disorders of the skin including acre and psoriasis, in adding in the healing of skin wounds and in alleviating bacterial, "viral"* and fingal infections when applied to the situs of the disorder. The compositions are also useful in the treatment for DITDESC. DETD(74) Link Hatta hours of the two treatment of the "NDGA" plant. The if the set, all a bounds of the two that "NDGA" plant. The if the set, all a bounds of the two plants in the trans. The Fig. 20 fth, composition against Papillouras, known the set. The Fig. 20 fth, composition against Papillouras, known the set. The set. The set of the set. The set of t	US PAT NO. 5,663.209 [IMAGE AVAILABLE] DATE ISSUED: Sep. 2, 1997 TITLE: Compounds for the suppression of HIV Tat transactivation INVENTOR: Ru Chilb. C. Huang, Baltimore, MD John M. Grabre, Baltimore, MD ASSIGNEE: The Johns Hopkins University, Baltimore, MD (U.S. corp.) APPL-NO: 086271.388 DATE FILLED: Apr. 4, 1996 ART-UNIT: 188 PRIM-EXMR: John W. Rollins LEGAL-REP: Cushman Darby & Cushman IP Group Fillsbury Madison & Sutro LLP => d fro US PAT NO: 5,837,222 [IMAGE AVAILABLE] US PAT NO: 5,837,222 [IMAGE AVAILABLE] Same INVENTOR: Robert A. Simoott, Chandler, AZ W. Dermis Caller, Phoenix, AZ Kerneth Frank DeBoer, Belgrade, MT ASSIGNEE: Larraecorp, Ltd., Chandler, AZ MPPL-NO: 087726,686 DATE FILED: Oct. 7, 1996
NVENTOR: Edward S. Neiss, Denver, CO Larry M. Allen, Golden, CO ASSIGNET APPL-NO. O7685, 600 APPL-NO. O7685, 600 APPL-NO. O7685, 600 ART-UNIT 183 PRIN-LENARY BINN W. Rollins LEGAL-RLF Kuryon & Kenyon Septembly Apple 183 Legal-Ruf Septembly 183 No. 184 Septembly 184 Septe	US PAT NO: 4,880,637 [IMAGE AVAILABLE] L8: 6 of 6 DATE ISSUED: Nov. 14, 1989 TITLE: Compositions of catecholic butanes with zinc INVENTOR: Russell 1. Jordan, Fort Collins, CO ASSIGNEE: Chemex Pharmaceuticals, Inc., Denver, CO (U.S. corp.) APPL-NO: 060924,620 DATE FILED: Oct. 28, 1986 ART-UNIT: 183 PRIM-EXMR: John W. Rollins LEGAL-REP: Kenyon & Kenyon US PAT NO: 4,880,637 [IMAGE AVAILABLE] L8: 6 of 6 ABSTRACT: The present invention provides new compositions comprising catecholic butanes and ionic zinc. The invention also relates to pharmacologically. The present invention provides new compositions, which are useful in the treatment of benigt, premalignant and malignant soil tumors, especially those of the skin. The toinc zinc may be in the form of a zinc salt, and the preferred catecholic butane is nortdihydrogusiaretic acid. SUMMARY: BSUM(8) Surprisingly, it has been discovered that the catecholic butane, "nordihydrogusiaretic" acid, and/or derivatives thereof as defined herein, in a pharmaceutical composition that includes ionic zinc, is

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gallate, sodium bisulfite, sodium hydrosulfite, sodium thiosulfate, sulfur dioxide, sulfurous acid, a tocopherol, or vitamin E is made by a process in which the plant material is extracted uting an organic seven; pederably acctone, and is then saturated with one of the listed reducing, agents acid to reduce the toxic "NDGA"* quinone, which maturally occurs in the plant acredit io "NDGA"* quinone, which maturally occurs in the plant acredit io "NDGA"* quinone, which maturally occurs in the plant acredit io "NDGA"* quinone, which maturally occurs in the plant acredit caid ester, an ascendic acid salt, by poplace; Leous acid, moreobie caid ester, an ascendic acid salt, by poplace; Leous acid, montohioglycerol, potrassiam bisulfate, propyl gallate, soulum bisulfate, sodium thosulfate, sodium thosulfate, sodium thosulfate, solium thosulfate, solium thosulfate, sulfatu dioxide, sulfurous acid, a tocopherol, or vitama E may be added to the extract to inhibit the natural oxidation of the "*NDGA** into the toxic "*NDGA** into the toxic "*NDGA** into the Louise extract to inhibit the natural oxidation of the "*NDGA** into the toxic "*NDGA** into the Louise extract is useful in the treatment of "*viral** if seases caused by winses from the Herpesviridae family or viruses which require the Sp1 sea of the plant is acid to the season of the "*Notation of the season of the season

tood additive. 8 Claims, 5 Drawing Figures

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	FREQUENCY TERM		GNIUROWSKI, ROMUALDIIN	63, FAUG HONGIN	0> GNABRE, JAN	GNABRE, JOHN WAN	GNABS, CHRISTIAN/IN	GNACINSKI, LEONARD T/IN	GNAD, GERHARD/IN	GNAD, JOSEF/IN	GNADE, BRUCE/IN	GNADE, BRUCE E/IN	GNADE, JERRY MICHAEL/IN	GNADEBERG, JULES/IN
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